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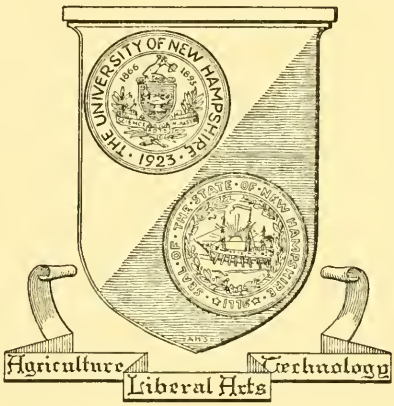

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THE UNIVERSITY OF NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF AGRICULTURAL CHEMISTRY

INSPECTION OF COMMERCIAL FERTILIZERS FOR 1935

MADE FOR THE
STATE DEPARTMENT OF AGRICULTURE

T. O. Smith and H. A. Davis

THE UNIVERSITY OF NEW HAMPSHIRE
DURHAM, N. H.

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Inspection of Commercial Fertilizers

MADE FOR THE STATE DEPARTMENT OF AGRICULTURE

The inspection of commercial fertilizers reported in this bulletin was made under the direction of the Honorable Andrew L. Felker, Commissioner of Agriculture. The state inspector, Mr. Eugene D. Sanborn, collected samples of 106 brands of fertilizer materials which were offered for sale by dealers or had been delivered to consumers during the year ending June, 1935. The general character of the fertilizer materials collected is shown by the following classification:

Complete fertilizer	83
Superphosphate (acid phosphate)	7
Nitrate of soda	1
Calnitro	1
Cyanamid	1
Sulphate of ammonia	2
Ground bone	4
Natural manures	7
	106

THE FERTILIZER LAW

The state official charged with the enforcement of the fertilizer law is the Commissioner of Agriculture. Copies of the law may be obtained from his office in Concord. All inquiries concerning the law and all matters relative to the registration of brands should be addressed to his office.

The purchaser's refusal to buy a fertilizer which does not conform to the law in every respect, will not only assist in the enforcement of the law but will at the same time insure him the protection of the law. Whether or not the purchaser familiarizes himself with the complete text of the fertilizer law, he should not accept from the dealer any bag of fertilizer which is not tagged and guaranteed in compliance with the law. The law governing these matters follows:

"Every lot or parcel of commercial fertilizer or fertilizer material sold or offered or exposed for sale within this state shall be accompanied by a plainly printed statement, clearly and truly certifying the number of net pounds of fertilizer in the package, the name, brand or trademark under which the fertilizer is sold, the name and address of the manufacturer or importer, the location of the factory, and a chemical analysis stating the minimum percentage of nitrogen, of available phosphoric acid and of water soluble potash expressed in whole numbers.

"No fertilizer or fertilizer material containing the three essential fertilizing elements, nitrogen, phosphoric acid and potash may be sold or offered for sale if the total minimum plant food nutrients contained therein is less than fourteen per cent by weight, provided however that natural animal and bird manures shall be excepted from the provisions of this section."

The chief purpose of the fertilizer law is to protect the consumer against the misbranded products which would doubtless soon appear upon the market if the sale of fertilizer was not under state regulation. The value of a fertilizer depends mainly upon its content of available plant food, particularly nitrogen, phosphoric acid and potash. The presence of these constituents can only be determined by a chemical analysis. To insure that they are being furnished by the manu-

facturer in the guaranteed amounts, it is necessary that each brand of fertilizer offered for sale be officially inspected and analyzed one or more times each year. When failure to meet the guarantee is proven by chemical analysis, the prosecution or seizure provisions of the law may be invoked.

In Table I are tabulated the grades of complete fertilizers analyzed in this year's inspection, the number of brands found by the inspector in each grade, the average analysis of the brands in each grade and the average retail price per ton.

TABLE I

Formula	Number of brands	Average per cent nitrogen	Average per cent available phosphoric acid	Average per cent water soluble potash	Average retail price per ton
2—8—10	2	2.20	8.06	9.70	$34.70
2—12—4	2	2.30	11.91	4.28	33.50
3—7—6	1	3.01	10.32	6.39	50.00
3—10—4	6	3.01	10.02	4.18	30.13
3—10—6	2	2.96	10.01	6.24	33.50
4—8—4	13	4.14	8.06	4.11	33.12
4—8—7	7	4.01	8.07	7.01	37.20
4—8—8	1	4.33	8.52	8.32	27.40
4—8—10	9	4.01	8.00	10.16	36.02
4—12—4	1	3.88	12.04	4.57	90.00
4—16—20	1	4.18	16.12	21.51	40.60
5—7—3	1	5.43	8.05	3.42	90.00
5—8—7	11	5.06	8.34	7.14	36.22
5—8—10	4	4.96	8.35	9.32	37.10
5—10—4	1	5.03	10.05	4.05	90.00
5—10—10	1	5.03	10.01	10.20	
6—8—6	1	6.02	8.35	6.24	28.60
6—11—10	1	6.04	11.15	9.42	
7—6—6	4	6.91	6.39	6.29	37.40
7—8—5	1	6.39	8.27	5.19	37.00
8—5—8	1	8.00	6.03	8.49	51.00
8—6—2	2	8.20	6.66	2.11	57.50
8—8—8	1	8.07	8.78	8.62	50.00
8—16—14	5	7.71	15.88	13.94	53.40
8—16—16	1	7.67	16.11	18.58	45.80
8—16—20	1	8.00	17.50	20.21	54.00
12—4—4	1	12.21	4.71	4.50	33.00
12—16—12	1	12.01	16.24	12.88	53.60

ANNUAL TONNAGE

Several attempts have been made to estimate the tonnage of fertilizer materials sold annually in the

state. The National Fertilizer Association has recently completed A Survey of the Plant Food Consumption in the United States for the year ended June 30, 1934. This survey shows the tonnage in each grade. The figures for New Hampshire are reprinted below.

Grade $N—P_2O_5—K_2O$	Rank	Tonnage	Per Cent of Total (Mixed Fertilizers) Actual	Cumulative
5—8—7	1	3,214	31.359	31.359
4—8—10	2	1,806	17.621	48.980
4—8—4	3	887	8.654	57.634
3—10—4	4	517	5.044	62.678
5—8—10	5	429	4.186	66.864
8—16—16	6	381	3.717	70.581
7—6—6	7	377	3.678	74.259
4—8—8	8	286	2.791	77.050
4—8—7	9	257	2.507	79.557
8—16—14	10	252	2.459	82.016
7—8—6	11	200	1.951	
5—16—7	12	198	1.932	
4—10—6	13	146	1.424	
2—8—10	14	142	1.385	
2—12—4	15	128	1.249	89.957
3—10—6	16	115	1.122	
4—12—4	17	104	1.015	
5—10—10	18	102	.995	
10—8—8	19	98	.956	
2—10—2	20	60	.585	94.630
8—8—8	21	50	.488	
8—24—8	22	48	.468	
6—8—6	23	48	.468	
10—16—14	24	47	.458	
8—13—11	25	43	.420	96.932
10—6—4	26	42	.410	
7—8—5	27	42	.410	
5—10—5	28	39	.381	
12—4—4	29	25	.244	
12—16—12	30	23	.224	98.601
8—5—8	31	20	.195	
7—13—11	32	18	.176	
8—16—20	33	17	.166	
4—16—20	34	17	.166	
5—8—5	35	15	.146	99.450
6—15—9	36	12	.117	
6—18—6	37	10	.098	
6—11—10	38	10	.098	
8—6—2	39	6	.059	
4—10—0	40	5	.049	
0—14—6	41	4	.039	99.910
10—5—10	42	2	.020	
4—10—5	43	2	.020	
5—6—6	44	2	.020	
7—5—2	45	1	.010	
3—7—6	46	1	.010	
2—8—2	47	1	.010	100.000
Total		10,249	100.000	

MATERIALS

Material	Tonnage	Material	Tonnage
Superphosphate 16%	945	Sulphate of Potash	16
Agricultural Lime	779	Basic Slag 18%	13
Steamed Bone	631	Muriate of Potash 60%	10
Nitrate of Soda	503	Nitrate of Potash (Chilean)	9
Sheep Manure	255	Superphosphate 32%	8
Sulphate of Ammonia	211	Castor Pomace	7
Limestone	129	Calcium Nitrate	4
Calnitro	121	Raw Bone Meal	4
Cyanamid	84	Poultry Grit	4
Muriate of Potash 50%	81	Dried Blood	2
Tankage	64	Fish	1
Sheep and Goat Manure	57	Cottonseed Meal	1
Ammonium Phosphate (13-48)	21	Calcium Chloride	1
		Total	3,961

Mixed Fertilizers	10,249 tons
Materials	3,961 tons
Total	14,210 tons

CONFORMITY TO GUARANTEE

The total amount of nitrogen, available phosphoric acid and potash guaranteed in the 83 brands of complete fertilizer averaged 21.40 per cent. The amount found by analysis was 21.81 per cent. The manufacturers, therefore, furnished on the average 0.41 per cent more than they guaranteed. The total amount furnished was less than the total amount guaranteed in 19 brands. The greatest deficiency was 1.70 per cent. The average of the other 18 deficiencies was 0.38 per cent. Four brands were deficient in all three constituents. Seven brands were deficient in two of the three constituents, four in nitrogen and available phosphoric acid, three in nitrogen and potash, and three in available phosphoric acid and potash.

Twenty-four brands were found to contain less than the guaranteed amount of nitrogen. The greatest deficiency was 0.61 per cent. The average of the other 23 nitrogen deficiencies was 0.19 per cent.

One brand failed to meet the guarantee in total phosphoric acid and 14 brands failed to meet the guarantee in available phosphoric acid. One brand was de-

ficient 0.64 per cent. The average of the other 13 deficiencies was 0.27 per cent.

Nineteen brands contained less potash than the guarantee. The greatest deficiency was 1.74 per cent. The average of the other 18 potash deficiencies was 0.27 per cent.

The analytical figures which follow show that in 34 cases the percentage found is exactly equal to the percentage guaranteed. In 22 cases the average of duplicate determinations gave these figures within 0.005 per cent. In the remaining 12 cases the deficiency was not greater than 0.02 per cent nitrogen and 0.03 per cent phosphoric acid or potash. When the manufacturer fails to meet his guarantee by an amount no greater than the experimental error in the determination, the analyst is not warranted in declaring the guarantee not met.

In the tabulation of the analyses in the following pages deficiencies of one-fourth of one per cent or more are shown in bold-faced type. The manufacturers are arranged alphabetically. The brand name is listed alphabetically or numerically by formula under the manufacturer.

	Nitrogen		Phosphoric Acid				Potash		Total Per Cent	
			Total		Available					
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
ACME GUANO CO. BALTIMORE, MD.										
Acme 3-10-6	3.00	3.01	.....	11.41	10.00	10.17	6.00	6.28	19.00	19.46
Acme 4-8-4	4.00	4.10	.....	9.48	8.00	8.01	4.00	4.00	16.00	16.11
Acme 4-8-7	4.00	4.21	.....	9.71	8.00	8.33	7.00	7.00	19.00	19.54
Acme 5-8-10	5.00	4.79	.....	9.62	8.00	8.87	10.00	9.64	23.00	23.30
AMERICAN AGRICULTURAL CHEMICAL CO. NORTH WEYMOUTH, MASS.										
AA Complete Manure with 10% Potash 4-8-10	4.00	4.00	.....	8.34	8.00	8.00	10.00	10.00	22.00	22.00
AA Corn Favorite 3-10-4	3.00	3.03	.....	10.65	10.00	10.32	4.00	4.00	17.00	17.35
AA Double Strength Fertilizer 8-16-20	8.00	8.00	.....	17.92	16.00	17.50	20.00	20.21	44.00	45.71
AA Monarch Fertilizer 4-8-4	4.00	4.02	.....	8.82	8.00	8.40	4.00	4.11	16.00	16.53
AA Peerless Fertilizer 4-8-7	4.00	3.88	.....	8.47	8.00	8.12	7.00	6.92	19.00	18.92
AA Potato and Vegetable Fertilizer 5-8-7	5.00	5.02	.....	8.77	8.00	8.05	7.00	7.00	20.00	20.07
AA Prolific 10% Potash Fertilizer 2-8-10	2.00	2.01	.....	8.40	8.00	8.09	10.00	9.80	20.00	19.90
AA Superphosphate 16%	.....	.....	.....	17.19	16.00	16.62	.....	.....	.....	.....
AA Top Dresser 7-6-6	7.00	6.79	.....	6.55	6.00	6.40	6.00	6.38	19.00	19.57

	Nitrogen		Phosphoric Acid				Potash		Total Per Cent	
			Total		Available					
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Agrico for Aroostook with 10% Potash 5-8-10	5.00	5.00	.....	8.71	8.00	8.12	10.00	**9.42**	23.00	**22.54**
Agrico for Corn 3-10-6	3.00	2.90	.....	10.29	10.00	9.85	6.00	6.19	19.00	18.94
Agrico for New England 4-8-10	4.00	4.02	.....	8.12	8.00	7.45	10.00	**9.55**	22.00	**21.02**
Agrico for Potatoes and Vegetables 5-8-7	5.00	5.11	.....	8.52	8.00	8.02	7.00	6.77	20.00	19.90
Bowker's Market Garden Fertilizer 4-8-4	4.00	4.02	.....	8.71	8.00	8.21	4.00	4.14	16.00	16.37
Bowker's Stockbridge Early Crop Manure 5-8-7	5.00	5.04	.....	8.68	8.00	8.00	7.00	7.00	20.00	20.04
Bowker's Stockbridge Potato and Vegetable Manure 4-8-10	4.00	4.00	.....	8.27	8.00	8.00	10.00	9.89	22.00	21.89
Bradley's Complete Manure with 10% Potash 4-8-10	4.00	4.00	.....	8.48	8.00	8.13	10.00	10.16	22.00	22.29
Bradley's XL Fertilizer 3-10-4	3.00	2.91	.....	10.28	10.00	**9.75**	4.00	4.00	17.00	**16.66**
Fine Ground Bone	2.47	2.61	23.00	26.35	.....	16.49	.....	.....	.....	.....
Netco Greens Formula 8-6-2	8.00	8.21	.....	6.71	6.00	6.13	2.00	2.07	16.00	16.41
Pulverized Sheep and Goat Manure	1.23	1.15	1.00	1.00	.....	0.92	2.00	2.62	.....	.....
American Cyanamid Co. Niagara Falls, Canada										
Aero Cyanamid Granular	22.00	22.05	.....	.....	.....	.....	.....	.....	.....	.....

APOTHECARIES HALL CO. WATERBURY, CONN.										
Bone Meal	3.70	4.02	21.00	22.45	.....	11.27	.....	.....	.....	.....
Liberty High Grade Corn 2-12-4	2.00	2.43	.....	13.56	12.00	12.21	4.00	4.33	18.00	18.97
Liberty High Grade Market Garden 5-8-7	5.00	5.30	.....	10.84	8.00	10.53	7.00	7.23	20.00	23.06
Liberty Market Garden Special 4-8-4	4.00	4.23	.....	9.31	8.00	8.04	4.00	4.18	16.00	16.45
Liberty Top Dresser for Grass and Grain 8-8-8	8.00	8.07	.....	9.00	8.00	8.78	8.00	8.62	24.00	25.47
Pulverized Sheep and Goat Manure	1.25	1.27	1.00	1.21	.....	1.07	2.00	2.29	.....	.....
ARMOUR FERTILIZER WORKS CARTERET, N. J.										
Armour's Big Crop Fertilizer 3-10-4	3.00	2.91	.....	10.30	10.00	9.55	4.00	4.76	17.00	17.22
Armour's Big Crop Fertilizer 4-8-4	4.00	3.90	.....	8.53	8.00	8.03	4.00	4.08	16.00	16.01
Armour's Big Crop Fertilizer 4-8-7	4.00	3.88	.....	8.49	8.00	7.93	7.00	6.84	19.00	18.75
Armour's Big Crop Fertilizer 4-8-10	4.00	4.00	.....	8.99	8.00	8.10	10.00	9.94	22.00	22.04
Armour's Big Crop Fertilizer 5-8-7	5.00	4.87	.....	8.52	8.00	7.85	7.00	6.88	20.00	19.60
Armour's Big Crop Fertilizer 5-8-10	5.00	5.00	.....	9.23	8.00	8.40	10.00	9.95	23.00	23.35
Armour's Big Crop Fertilizer 6-11-10	6.00	6.04	.....	12.02	11.00	11.15	10.00	9.42	27.00	26.61
Armour's Big Crop Fertilizer 8-16-14	8.00	7.47	.....	16.49	16.00	15.80	14.00	13.83	38.00	37.10
Armour's Big Crop Superphosphate 16%	.....	.....	.....	17.17	16.00	16.03	.....	.....	.....	.....
Sheep and Goat Manure	1.25	1.53	1.00	1.42	.....	1.18	2.00	3.40	.....	.....
Sulphate of Ammonia	20.56	20.68	.....	.....	.....	.....	.....	.....	.....	.....
ATMOSPHERIC NITROGEN CORPORATION HOPEWELL, VA.										
Arcadian, the American Nitrate of Soda	16.00	16.19	.....	.....	.....	.....	.....	.....	.....	.....

	Nitrogen		Phosphoric Acid				Potash		Total Per Cent	
			Total		Available					
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Consolidated Rendering Co. Boston, Mass.										
Corenco 4-8-4 Corn and Vegetable	4.00	4.00	.....	8.63	8.00	8.07	4.00	4.04	16.00	16.11
Corenco 4-8-10 Potato Grower	4.00	4.00	.....	8.82	8.00	8.02	10.00	10.43	22.00	22.45
Corenco 5-8-7 General Crop Manure	5.00	5.01	.....	8.79	8.00	8.26	7.00	7.00	20.00	20.27
Corenco 8-16-14 Two In One	8.00	7.90	.....	16.63	16.00	16.03	14.00	13.59	38.00	37.52
Corenco Ground Bone	2.47	2.16	23.00	26.07	.....	18.59	.....	.....	.....	.....
Corenco Sheep Manure	1.23	1.23	0.50	0.85	.....	0.76	2.00	2.67	.....	.....
New England 8-6-2 Putting Green Special	8.00	8.20	.....	7.24	6.00	7.18	2.00	2.15	16.00	17.53
Superphosphate 16%	.....	.....	.....	17.59	16.00	17.46	.....	.....	.....	.....
Eastern States Farmers' Exchange Springfield, Mass.										
Eastern States 4-8-8 Open Formula Fertilizer	4.00	4.33	.....	8.80	8.00	8.52	8.00	8.32	20.00	21.17
Eastern States 4-16-20 Open Formula Fertilizer	4.00	4.18	.....	16.78	16.00	16.12	20.00	21.51	40.00	41.81
Eastern States 6-8-6 Open Formula Fertilizer	6.00	6.02	.....	8.70	8.00	8.35	6.00	6.24	20.00	20.61
Eastern States 8-16-16 Open Formula Fertilizer	8.00	7.67	.....	16.32	16.00	16.11	16.00	18.58	40.00	42.36
Eastern States 12-4-4 Open Formula Fertilizer	12.00	12.21	.....	4.80	4.00	4.71	4.00	4.50	20.00	21.42

Eastern States 12-16-12 Open Formula Fertilizer	12.00	12.01	.....	16.58	16.00	16.24	12.00	12.88	40.00	41.13
Eastern States 16% Superphosphate	.....	.....	16.50	17.08	16.00	16.08	.....	.....	.....	.....
Eastern States Calnitro	20.50	20.53	.....	.....	.....	.....	.....	.....	.....	.....
THOMAS W. EMERSON CO. BOSTON, MASS.										
Lawn and Garden Dressing English Formula 5-7-3 ..	5.00	5.43	.....	14.28	7.00	8.05	3.00	3.42	15.00	16.90
HUDSON VALLEY FUEL CORP. TROY, N. Y.										
Nusoil Sulphate of Ammonia	20.80	20.82	.....	.....	.....	.....	.....	.....	.....	.....
INTERNATIONAL AGRICULTURAL CORP. WOBURN, MASS.										
Caribee Market Garden Fertilizer 5-10-10	5.00	5.03	.....	11.25	10.00	10.01	10.00	10.20	25.00	25.24
International 3-10-4	3.00	3.04	.....	10.56	10.00	10.00	4.00	4.17	17.00	17.21
International 4-8-4	4.00	3.81	.....	8.16	8.00	7.67	4.00	4.01	16.00	15.49
International 4-8-7	4.00	4.00	.....	8.69	8.00	8.20	7.00	6.82	19.00	19.02
International 5-8-7	5.00	5.01	.....	8.47	8.00	8.02	7.00	7.65	20.00	20.68
International 7-6-6	7.00	6.82	.....	6.51	6.00	6.00	6.00	6.42	19.00	19.24
International 8-16-14	8.00	7.69	.....	15.77	16.00	15.36	14.00	13.42	38.00	36.47
International 16% Superphosphate	.....	.....	.....	17.22	16.00	15.90	.....	.....	.....	.....

	Nitrogen		Phosphoric Acid				Potash		Total Per Cent	
			Total		Available					
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Lowell Fertilizer Co. Boston, Mass.										
Lowell 3-10-4 Animal Brand	3.00	3.16	.....	10.68	10.00	10.18	4.00	4.16	17.00	17.50
Lowell 4-8-4 Corn and Vegetable	4.00	4.11	.....	9.08	8.00	8.27	4.00	4.08	16.00	16.46
Lowell 4-8-10 Potato Grower	4.00	4.00	.....	8.08	8.00	8.00	10.00	10.45	22.00	22.45
Lowell 5-8-7 Market Garden Manure	5.00	4.68	.....	9.43	8.00	8.45	7.00	7.39	20.00	20.52
Lowell 5-8-10 Aroostook Special for Potatoes	5.00	5.03	.....	8.37	8.00	8.01	10.00	8.26	23.00	21.30
Merrimack Farmers' Exchange Concord, N. H.										
Merrimack Brand 3-10-4	3.00	3.00	.....	11.12	10.00	10.31	4.00	4.00	17.00	17.31
Merrimack Brand 4-8-4	4.00	4.07	.....	8.73	8.00	8.00	4.00	4.07	16.00	16.14
Merrimack Brand 4-8-7	4.00	4.01	.....	8.90	8.00	8.10	7.00	7.00	19.00	19.11
Merrimack Brand 4-8-10	4.00	4.02	.....	8.89	8.00	8.03	10.00	10.66	22.00	22.71
Merrimack Brand 5-8-7	5.00	5.14	.....	8.87	8.00	8.03	7.00	7.05	20.00	20.22
Merrimack Brand 7-6-6 Top Dressing	7.00	6.90	.....	6.76	6.00	6.43	6.00	6.03	19.00	19.36
Merrimack Brand 7-8-5 Complete Fruit	7.00	6.39	.....	8.86	8.00	8.27	5.00	5.19	20.00	19.85
Merrimack Brand 8-16-14	8.00	7.69	.....	16.83	16.00	16.18	14.00	14.67	38.00	38.54

NATURAL GUANO CO. AURORA, ILL.										
Sheep's Head Pulverized Sheep Manure	2.00	2.25	.....	1.43	1.00	1.18	2.00	3.15	.....	.....
PULVERIZED MANURE CO. CHICAGO, ILL.										
Wizard Brand Pulverized Sheep Manure	2.00	1.94	.....	1.62	1.00	1.48	2.00	2.36	.....	.....
ROGERS & HUBBARD CO. PORTLAND, CONN.										
Red H 4-8-4	4.00	5.31	.....	8.32	8.00	7.64	4.00	4.46	16.00	17.41
Red H 5-8-7	5.00	5.00	.....	9.36	8.00	8.12	7.00	6.87	20.00	19.99
Red H Brand 7-6-6	7.00	7.13	.....	7.42	6.00	6.72	6.00	6.33	19.00	20.18
Red H Brand 8-16-14	8.00	7.78	.....	16.45	16.00	16.03	14.00	14.16	38.00	37.97
Hubbard's All Soils All Crops Fertilizer 4-8-4	4.00	4.00	.....	10.12	8.00	8.10	4.00	4.14	16.00	16.14
Hubbard's Corn and Grain Fertilizer 2-12-4	2.00	2.16	.....	12.99	12.00	11.61	4.00	4.23	18.00	18.00
Hubbard's High Potash Fertilizer 2-8-10	2.00	2.39	.....	9.18	8.00	8.03	10.00	9.60	20.00	20.02
Hubbard's Potato Fertilizer 5-8-7	5.00	5.45	.....	10.84	8.00	8.32	7.00	7.73	20.00	21.50
Hubbard's Superphosphate 16%	.....	.....	.....	17.34	16.00	16.83	.....	.....	.....	.....
Oats and Top Dressing	8.00	8.00	8.00	8.17	5.00	6.03	8.00	8.49	21.00	22.52
Seeding Down Fertilizer	3.00	3.01	12.00	12.53	7.00	10.32	6.00	6.39	16.00	19.72
Soluble Corn and Market Garden Manure	4.00	4.00	.....	9.56	8.00	7.85	7.00	7.26	19.00	19.11
SAGADAHOC FERTILIZER CO. BOWDOINHAM, ME.										
Acid Phosphate	.....	.....	.....	17.78	18.00	17.64	.....	.....	.....	.....

	Nitrogen		Phosphoric Acid				Potash		Total Per Cent	
			Total		Available					
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Garden Fertilizer 4-8-4	4.00	4.06	.....	8.89	8.00	8.16	4.00	4.00	16.00	16.22
General Use and Potatoes 4-8-7	4.00	4.09	.....	8.94	8.00	8.02	7.00	7.23	19.00	19.34
High Grade Potato 4-8-10	4.00	4.01	.....	9.06	8.00	8.20	10.00	10.39	22.00	22.60
Sagadahoc 4-8-4 For All Around	4.00	4.14	.....	8.93	8.00	8.09	4.00	4.08	16.00	16.31
SWIFT & CO. BALTIMORE, MD.										
Bone Meal Fertilizer	2.47	2.65	23.00	26.32	.....	.....	.....	.....	.....	.....
Vigoro, for Lawns, Gardens, Flowers, Shrubbery, Trees	4.00	3.88	.....	12.93	12.00	12.04	4.00	4.57	20.00	20.49
TENNESSEE CORPORATION NEW YORK, N. Y.										
Loma	5.00	5.03	.....	10.89	10.00	10.05	4.00	4.05	19.00	19.13
WALKER-GORDON FARMS JULIUSTOWN, N. J.										
Driconure 1-1-1	1.00	2.03	1.00	0.87	.....	0.68	1.00	1.65	.....	.....

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